	Application No.	Applicant(s)
Notice of Allowability	09/751,469	WEISSER ET AL.
	Examiner	Art Unit	
	Jungwon Chang	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *7/19/05*.

2. ☒ The allowed claim(s) is/are *24-61, now renumbered as 1-38*.

3. ☒ The drawings filed on *29 December 2000* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some*   c)☐ None   of the:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

         3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

     (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

         1)☐ hereto or 2)☐ to Paper No./Mail Date _____ .

     (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

     Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date *10/25/01*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

2.   The application has been amended as follows:

In Claims

Claims 1-23 (Canceled)

Claim 24 (Currently amended) An object-oriented system that relates network

components with a customer, the system comprising:

a mapping module in communication with a network component data module and

with a customer data module to create an object-oriented model of the network

components, wherein the network component data module contains network component

data arranged in a form that can be manipulated using an object-oriented application,

wherein the object-oriented model includes: ;and

at least one output of the mapping module, the at least one output comprising:

a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

a plurality of customer identifiers assigned to network components to relate each identified customer with network components servicing that identified customer at a lowest abstraction layer.

25. (Previously presented)   The system of claim 24, further comprising the network component data module.

26. (Previously presented)   The system of claim 24, further comprising the customer data module.

27. (Previously presented)   The system of claim 24, wherein the customer identifiers are unique relative to other customer numbers.

28. (Previously presented)   The system of claim 24, wherein the mapping module provides a bi-directional mapping that relates network components to the customer and that relates the customer with network components.

29. (Previously presented)   The system of claim 24, wherein the network component data module and the customer data module are a network management system in communication with the mapping module.

30. (Previously presented)   The system of claim 24, wherein the mapping module is configured to assign the customer identifier to the network component at a second lowest abstraction layer when all of the network components in the lowest abstraction layer provide service to the same customer.

31. (Previously presented)   The system of claim 24, wherein the at least one output of the mapping module further comprises:

a service management sub-tree layer wherein each supported service has a set of instances corresponding to the network components that provide the service.

32. (Previously presented)   The system of claim 24, wherein each customer identifier in the plurality of customer identifiers comprises a predetermined character string, and wherein each character string has a series of substrings, and wherein each substring corresponds to a network component having a relationship with the customer.

33. (Currently amended)   An object-oriented system that relates network components with a customer, the system comprising:

a mapping module in communication with a network component data module and with a customer data module, the mapping module comprising:

means for creating an object-oriented model of network components from data module containing-network component data arranged in a form that can be manipulated using an object-oriented application, and wherein the mapping module comprisesobject-oriented model includes:

~~means for creating an object-oriented model of the network components comprising~~ a
plurality of sub-tree layers, wherein each layer represents a layer of abstraction,
wherein a root represents the highest sub-tree layer and the highest level of
abstraction; and

~~means for assigning~~a plurality of customer identifiers <u>assigned</u> to network components to
relate each identified customer with network components servicing that identified
customer at a lowest abstraction layer.

34. (Previously presented)   The system of claim 33, further comprising the network
component data module.

35. (Previously presented)   The system of claim 33, further comprising the customer
data module.

36. (Previously presented)   The system of claim 33, wherein the customer identifiers
are unique relative to other customer numbers.

37. (Previously presented)   The system of claim 33, wherein the mapping module
provides a bi-directional mapping that relates network components to the customer and that
relates the customer with network components.

38. (Previously presented)   The system of claim 33, wherein the mapping module includes:

means for assigning the customer identifier to the network component at a second lowest abstraction layer when all of the network components in the lowest abstraction layer provide service to the same customer.

39. (Previously presented)   The system of claim 33, wherein the mapping module further comprises:

means for creating a service management sub-tree layer, wherein each supported service has a set of instances corresponding to the network components that provide the service.

40. (Previously presented)   The system of claim 33, wherein the mapping module further comprises:

means for a creating a customer identifier that indicates the relationship between a plurality of network components and the customer.

41. (Currently amended)   A method for relating network components with a customer, the steps-method comprising:

creating a mapping module in communication with a network component data module and a customer data module;

creating an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the object-oriented model includes a plurality of sub-tree layers, wherein each layer represents a

layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

assigning a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

42. (Currently amended)   The method of claim 41, further comprising the step of:

gathering the network component data; and

arranging the network component data into the form that can be manipulated using the object-oriented application.

43. (Currently amended)   The method of claim 41, further comprising the step of:

gathering customer data for use in assigning the customer identifier to the network components.

44. (Currently amended)   The method of claim 41, wherein the customer identifier is unique relative to other customer identifiers.

45. (Currently amended)   The method of claim 41, further comprising the step of:

relating a customer to a service when a network component may provide multiple services.

46. (Currently amended)   The method of claim 41, further comprising the step of:

updating the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

47. (Currently amended)   The method of claim 41, further comprising ~~the step of~~:

updating the relationships between the network components and the customer identifiers in accordance with the assigning step.

48. (Currently amended)   An object-oriented system that relates network components with a customer, the system comprising:

<u>a mapping module in communication with a network component data module and a customer data module, the mapping module comprising:</u>

means for creating an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the <u>object-oriented</u> model includes a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

means for assigning a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

49. (Previously presented)   The system of claim 48, further comprising:

means for gathering the network component data; and

means for arranging the network component data into the form that can be manipulated using the object-oriented application.

50. (Currently amended) The system of claim 48, further comprising ~~the step of~~:

means for gathering customer data for use in assigning the customer identifier to the network components.

51. (Previously presented) The system of claim 48, wherein the customer identifier is unique relative to other customer numbers.

52. (Previously presented) The system of claim 48, further comprising:

means for relating a customer to a service when a network component may provide multiple services.

53. (Previously presented) The system of claim 48, further comprising:

means for updating the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

54. (Previously presented) The system of claim 48, further comprising:

means for updating the relationships between the network components and the customer identifiers in accordance with the assigning step.

55. (Currently amended) A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to perform the ~~steps of~~ at least the following:

create a mapping module in communication with a network component data module and a customer data module;

createing an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the model includes a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

assigning a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

56. (Currently amended)   The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform the further steps of at least the following:

gathering the network component data; and

arrangeing the network component data into the form that can be manipulated using the object-oriented application.

57. (Currently amended)   The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform the further step of at least the following:

gathering customer data for use in assigning the customer identifier to the network components.

58. (Previously presented)   The medium of claim 55, wherein the customer identifier is unique relative to other customer identifiers.

(c)   (c)

59. (Currently amended)   The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

relate~~ing~~ a customer to a service when a network component may provide multiple services.

60. (Currently amended)   The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

update~~ing~~ the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

61. (Currently amended)   The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

updat~~ging~~ the relationships between the network components and the customer identifiers in accordance with the assigning ~~step~~.

3.   The following is an examiner's statement of reasons for allowance: The prior art

of record, either alone or in combination, teach or suggest a mapping module

communicates with a network element data module and a customer data module to

create an objected-oriented model of the network elements. The object-oriented model

comprises several sub-tree layers, which represent abstraction layers, and several

unique customer identifiers, which relates the customer to certain network elements.

        Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

4.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Jungwon Chang whose telephone number is 571-272-
3960. The examiner can normally be reached on 9:30-6:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, John A Follansbee can be reached on 571-272-3964. The fax phone
number for the organization where this application or proceeding is assigned is 703-
872-9306.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

JWC
August 17, 2005

VIET D. VU
PRIMARY EXAMINER